

JAMES
Serial No. 09/029,581

REMARKS

Reconsideration of this application is respectfully requested.

The Examiner's attention is drawn to the fact that this application is a national phase of a PCT application in which applicant's certified priority document was earlier filed. Furthermore, the USPTO Notification of Acceptance dated 6 August 1998 specifically acknowledges receipt of the priority document. The Office Action Summary page does not indicate such receipt and the Examiner is therefore respectfully requested to double-check and ensure that in fact it has been properly received and made of record in this file.

The Examiner's attention is also drawn to the attached substitute Abstract of the Disclosure on a separate sheet for use in lieu of the originally filed PCT Abstract. Suitable amendments have been made throughout specification so as to add the usual headings and the like so as to place this application in more traditional U.S. format. Minor errors have been corrected as discovered.

The Examiner's attention is also drawn to the Form PTO-1449 which applicant filed with other application papers in the USPTO on 6 March 1998 listing all of the references cited in the International Search Report. A copy of these references should have been routinely transmitted to the USPTO via the PCT. Just in case that did not happen for some reason, a copy of these three references is attached together with another copy of the Form PTO-1449 and the International Search Report. Official citation and consideration of these references is requested if not already accomplished and return of a fully initialed form PTO-1449 is requested.

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Under the circumstances, it is not believed that any further IDS fee should be necessary at this stage of prosecution. On the other hand, if the Examiner deems such a fee to be necessary, then authority is hereby given to charge such fee to our Account No. 14-1140.

Attention is also drawn to the attached letter to the Chief Draftsperson requesting drawing amendment as shown in red on the attached photocopies of several of the drawing sheet. Subject to the Examiner's approval and receipt of a Notice of Allowance, suitable corrected substitute formal drawings will be timely filed.

Accordingly, all outstanding formal issues are now believed to have been resolved in the applicant's favor.

The rejection of claims 1-8 under 35 USC§102 as allegedly anticipated by Brunner et al '971 is respectfully traversed.

In a nutshell, applicant's invention involves the use of a key or other unique data (e.g. a time stamp) stored in association with an index entry of a cache database for comparison with similar data maintained in the master database. Accordingly, to confirm the cache data, instead of possibly having to transfer a whole row of data, only the index data needs to be handled.

For example, notice that in applicant's exemplary embodiment at Figure 3c, a time stamp TS is located with the shorter index data—whereas in the prior art of Figures 3a and 3b, there is no such field associated with the index. Note further that in comparing

the prior art data consistency check procedure of Figure 5 (where an entire data row has to be retrieved and compared), applicants exemplary embodiment of Figure 6 only requires the database index to be retrieved and compared.

While Brunner et al '971 generally deals with a master database and a cache database, it has nothing to do with checking data consistency between the cache database and the master database—and thus is even less relevant than the prior art already cited and considered by applicant in the introductory portions of this specification. A more detailed discussion of this situation is now presented below.

The applicant's invention is concerned with checking data consistency between data held in a master database and data held in a cache database. Figure 1 of the drawings shows a master database 126 and three cache databases 136. The claims are directed to the process illustrated in Figure 6 of the drawings and the row and index structure of the database shown in Figure 3c. On page 6, the structure shown in Figures 3a and 3b are acknowledged as prior art systems and the structure shown in Figure 3c is described as an embodiment of the invention. Note that in Figure 3c there is a time stamp TS associated with the index. Because the process of Figure 6 is described with reference to the process of Figure 5, it is necessary to read the description of the processes of both Figures 5 and 6 in order to understand the exemplary embodiment of the invention. These processes are described from line 21 on page 11 line 15 on page 12.

As set out in this passage, in the process of Figure 5, in a step 500 a client 130 transmits a query across the network to the file server 100 to read data from the file server. The query includes an identifier for the data row required and the respective time stamp. In a step 525, the file server 100 compares the time stamp of the cached data row

with the time stamp of the master data row which has been requested. If the time stamps are the same the file server sends a reply to the client 130 that the cached data is still valid. If the time stamps are different, the file server transmits the entire data row to the client 130 to update the cached database 136.

In the process of Figure 6, steps 600 to 620 are iquivalent to steps 500 to 520 in Figure 5. However, in step 625, the file server 100 compares the time stamp in the index entry for the requested data row with the time stamp ofthe cached data row as received in the query. If the time stamps are not the same, the current requested data row from the master database is returned to the client 130 to update the cache database in step 635. If the time stamps are the same, in a step 640, the file server transmits a message to the client 130 that the cache copy is still valid.

The advantage of reading the time stamp of an index entry (rather than the time stamp of a row from the master database) is that it avoids the need to read the whole row from the master database and thus reduces the processing load on the file server.

As explained at lines 18 to 34 on page 13 of the specification although time stamps are used in the example of the invention which is described with reference to Figure 6, other methods for making data rows to enable data consistency comparison are possible. Thus, claims 1 to 5 recite "keys" rather than "timestamps".

Claim 1 is limited to comparing a first key stored in association with an item of data in a cached database with a second key stored in association with an index entry for the respective item of data in a master database. This same limitation is also present in claim 2. A corresponding limitation also exists in claim 5. Claim 6 is directed to the

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database index itself and recites that the index includes "version information which changes each time the respective information in the database changes". The time stamps described in the exemplary embodiment of the invention are an example of the "version information" of claim 6.

Brunner et al is directed to a method of generating a user interface or a database that is adaptable to various database systems. More specifically it is directed to the problems that are set out in column 2, lines 13-18.

In Figure 1, Brunner et al does show a cache database 26 as well as a remote database 12. However, there is no disclosure in Brunner et al of checking data consistency between data held in the cache database and data held in the remote database. The Examiner has drawn attention to the passage from line 53 in Column 4 to line 7 in Column 5. Although this passage does refer to the local cache database 26, there is no disclosure of checking data consistency between the two databases. The Examiner has also drawn attention to the first paragraph in Column 15. Again, although this passage does refer to the cache database, there is no disclosure of checking data consistency.

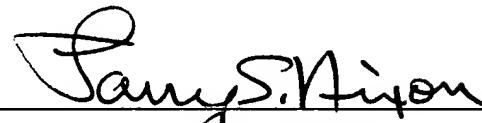
Accordingly, this entire application is now believed to be in condition for allowance and a formal notice to that effect is respectfully solicited.

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Respectfully submitted,

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